

**End Semester/Reappear (Semester III) Examination December 2024**

**Programme: MCA**

**Course: Artificial Intelligence & Applications**

**Course Code: 3CIT201**

**Enrollment No: \_\_\_\_\_**

**Full Marks: 70**

**Time: 3 Hrs.**

**Section I**

**1. Short Answer type questions. Answer any four.**

**4 x 5 = 20**

- Explain the Best-First-Search Procedure with suitable examples.
- Explain the Bayesian Networks in AI.
- Describe the applications of Neural Networks in brief.
- State the Problem Characteristics of AI.
- Brief some application areas of AI.
- State the comparison between supervised learning and unsupervised learning. Use suitable examples to explain both.

**Section II**

**Long Answer type questions. Answer any three.**

**3 x 10 = 30**

- Compare Forward Versus Backward Reasoning.
- What is meant by reinforcement learning? Enumerate its practical applications.
- Explain Expert system with suitable real world examples. Also, describe the function of its components.
- Compare DFS and BFS with merits and demerits.
- Explain Semantic and Syntactic analysis in Natural Language Processing.

**Section III**

**Application based questions. Answer any one.**

**1 x 20 = 20**

- Discuss the properties of intelligent agents.
  - How do simple reflex agents work? Give example(s) of simple reflex agents.
- Discuss various approaches and issues in knowledge representation. Also discuss various Problems in representing knowledge.
- Discuss about the heuristic function. Explain how the heuristic function helps during the search procedure with a suitable example.

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